

Appl. No. 10/049,787
Amend. dated October 17, 2003
Reply to Office Action of May 20, 2003

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-69 (Canceled)

70. (New) A welding device in communication with a computer network comprising:

a) a current source for supplying electrical energy to the welding device

b) at least one electrode in communication with said current source;

c) a housing;

d) a control and evaluation unit in communication with said current source disposed in said housing;

e) at least one memory system disposed in said housing and in communication with said control and evaluation unit, said

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memory system for storing a set of welding parameters and a set of instructions for controlling said control and evaluation unit;

f) a communications interface disposed in said housing coupled to said control and evaluation unit for two way data exchange between said control and evaluation unit and the computer network;

g) at least one sensor system in communication with said communications interface for detecting data relevant to welding during operation of the welding device; and

h) a HTTP server in communication with said communications interface wherein said HTTP server is for receiving information from the computer network including welding parameters and forwarding this information onto said control and evaluation unit and wherein said HTTP server is for receiving information from said communications interface in a form of welding parameters wherein this information is transmitted over the computer network to other computers.

71. (New) The device as in claim 70, wherein said HTTP server is integrated with said welding device and said current

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source.

72. (New) The device as in claim 70, wherein said HTTP server is disposed external to said welding device and said current source.

73. (New) The welding device as in claim 70, wherein said HTTP server forms a connection with a network which includes at least one additional HTTP server.

74. (New) The welding device as in claim 73, wherein said network is in the form of the Internet.

75. (New) The welding device as in claim 70, wherein said control and evaluation unit is a computer unit which operates via at least one software module of a control program and processes and prepares received data or data to be transmitted.

76. (New) The welding device as in claim 70, wherein said communications interface is a TCP/IP interface that enables communication to be operated using a TCP/IP protocol.

77. (New) The welding device as in claim 70, wherein said

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communications interface is designed as a link to a local area network.

78. (New) The welding device as in claim 75, wherein said at least one software module can be downloaded via a local area network to said control and evaluation unit.

79. (New) The welding device as in claim 70, wherein said control and evaluation unit has a standardized interface, and wherein said communications interface is a modem.

80. (New) The welding device as in claim 70, wherein said control and evaluation unit has a standardized interface, and wherein said communications interface is a network card.

81. (New) The welding device as in claim 80, wherein said control and evaluation unit has a standardized interface that is a serial interface in the form of a RS 232 interface.

82. (New) The welding device as in claim 70, wherein said communications interface can be used to download or upload data for a welding process or welding codes.

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83. (New) The welding device as in claim 70, wherein said communications interface is used to transmit data relating to operating supplies, such as the quantity and nature of a welding electrode, a fusible welding wire, an inert gas, or data relating to components susceptible to wear, a position of a contact sleeve, a position of a gas nozzle; wherein this information can be transmitted to other computers on the network via said communications interface.

84. (New) The welding device as in claim 70, wherein said communications interface is in communication with the computer network to receive or transmit in cycles, data relating to the operation of the welding device including the duration of use, timing or usage, and welding settings.

85. (New) The welding device as in claim 70, wherein said input device is set to operate said welding device and to navigate and select data from a set of data files in a technical data base for use with welding technology.

86. (New) The welding device as in claim 85, wherein said input device comprises a keyboard, a pointer device, a push-stick control member, at least one rotating or sliding member with

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keying or switching functions.

87. (New) The welding device as in claim 70, further comprising an output device for displaying a set of data that can be input by said input device, managed by said control and evaluation unit or retrieved by said computer network which can then be displayed on said output device.

88. (Now) The welding device as in claim 87, wherein said control and evaluation unit comprises a personal computer, and wherein said output device is in the form of a monitor.

89. (Now) The welding device as in claim 70, wherein said software modules are object oriented software modules.

90. (New) The welding device as in claim 70, wherein said control and evaluation unit has a software module for a sequencing system or operating system for integrating the object oriented software modules and processing a control program.

91. (New) The welding device as in claim 70, wherein said control and evaluation unit operates said software modules on a cyclical or interrupt-controlled basis.

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92. (New) The welding device as in claim 91, wherein said software modules are written in a JAVA source language.

93. (New) The welding device as in claim 70, wherein said control and evaluation circuit has a JAVA interpreter.

94. (New) The welding device as in claim 70, wherein said control and evaluation circuit has a JAVA processor.

95. (New) The welding device as in claim 70, wherein said communications interface is a wireless communications interface that sets up a wireless data transmission route to a desired communication or transmission partner.

96. (New) The welding device as in claim 70, wherein said communications interface is an infrared interface for transmitting and receiving infrared signals between said welding device and a mobile telephone.

97. (New) The welding device as in claim 96, wherein said infrared interface of said communications interface is set to connect with an infrared interface of a mobile telephone.

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98. (New) The device as in claim 70, further comprising a programming and display unit wherein said communications interface connects directly with said programming and display unit.

99. (New) A method for operating a welding device in communication with a computer network comprising a current source; a control and evaluation unit in communication with said current source; a communications interface in communication with said control and evaluation unit; at least one sensor system in communication with said communications interface, a web server in communication with said communications interface, the method comprising the steps of:

supplying electrical energy from said current source to at least one electrode in communication with the current source;

monitoring a set of welding parameters of the welding unit during operation using the sensor system;

exchanging data in two directions between said control and evaluation unit and the computer network, via the communications interface, through a communications network, the information

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including said welding parameters, and forwarding this information onto said control and evaluation unit; and

running at least one software module on said control and evaluation unit, wherein said at least one software module receives instructions in the form of data exchanged over the computer network to control a welding process.

100. (New) The method as in claim 99, further comprising the step of:

transmitting codes across the computer network to control the software modules which are run by said control and evaluation unit.

101. (New) The method as in claim 100, further comprising the step of:

transmitting operating data relating to operating supplies, operating statuses through said communication interface through the communications network to another server on the network.

102. (New) The method as in claim 101, further comprising

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the step of:

downloading servicing requirement messages and service requests including messages relating to stocks of operating supplies and orders for operating supplies from said control and evaluation unit to another server on the communications network.

103. (New) The method as in claim 99, further comprising the step of:

downloading servicing requirement messages and service requests including messages relating to stocks of operating supplies and orders for operating supplies from said control and evaluation unit to another server on the communications network.

104. (New) The method as in claim 99, wherein said communications network is in the form of the Internet.

105. (New) A welding device in communication with a computer network including a web server, the welding device comprising:

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b) at least one electrode in communication with said current source;

c) a control and evaluation unit in communication with said current source;

d) an input device in communication with said control and evaluation unit;

e) a communications interface coupled to said control and evaluation unit for two way data exchange between said control and evaluation unit and the computer network; and

f) at least one sensor system in communication with said communications interface for detecting welding parameters selected from the group consisting of: welding current rating, temperature conditions, burning depth, characteristic features of a welding arc, and guiding of the welding torch during the welding process;

wherein the web server is in communication with said communications interface wherein the web server is for receiving information from a communications network including said welding

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parameters and forwarding this information onto said control and evaluation unit and the web server is for receiving information from said communications interface in a form of said welding parameters wherein this information is transmitted over the computer network.